## Astragalus mohavensis S. Watson var. hemigyrus (Clokey [1942]) Barneby

## **HALFRING MILKVETCH**

**FAMILY:** Fabaceae, the legume family.

**SYNONYMS:** Astragalus hemigyrus

STATUS:

Heritage Program SENSITIVE LIST, ranks: G3 T2 S2

**USFWS/ESA:** species of concern. **STATE OF NEVADA:** FULLY PROTECTED. **BLM:** Special Status Species. **USFS:** Humboldt-Toiyabe NF Sensitive Species. **NNNPS:** ENDANGERED.

**POPULATION CENSUS: 30 occurrences mapped** at 1.0 km (0.6 mi) separation, OR **42 occurrences mapped** at 0.16 km (0.1 mi) separation; total estimated **individuals unknown**, total estimated **area 163+ ha (403+ ac)**. **TREND:** unknown.

**IMPACTS AND MAJOR THREATS:** Some habitat is vulnerable to off-road vehicle use and other recreational activities, dumping, and feral horse and burro trampling.

INVENTORY EFFORT: Most recent entered survey 1999, average year of last survey 1993.

Years since last entered survey (percent of mapped records at various survey ages): 0-5 yrs: 69.8%; 6-10 yrs: 4.7%; 11-20 yrs: 18.6%; 21-30 yrs: 4.7%; 51+ yrs or unknown: 2.3%.

**LAND MANAGEMENT** in decreasing predominance: U. S. Bureau of Land Management, U. S. Fish and Wildlife Service, U. S. Department of Defense, Humboldt-Toiyabe National Forest, private lands (?).

**RANGE:** Clark, Lincoln, and Nye counties, Nevada; also in CA (extirpated). **Nevada endemic.** Maximum **range dimension 123.7 km (76.9 mi)** excluding most disjunct record. **Type specimen** collected in Clark County.

ELEVATIONS RECORDED: 3000-5600 feet (914-1707 meters).

**HABITAT:** Carbonate gravels and derivative soils on terraced hills and ledges, open slopes, and along washes in the creosote-bursage, blackbrush, and mixed-shrub zones.

PHENOLOGY: flowering early-spring. Range of most frequent survey months: April-June.

LIFE-FORM AND HABIT: annual or short-lived perennial herb.

**DESCRIPTION:** This variety is similar to Astragalus mohavensis var. mohavensis, but has slightly smaller flowers, and shorter, curved or coiled fruits.

**PHOTOGRAPHS:** Knight and Smith (1994), Knight et al. (1997), Niles et al. (1999), Weixelman and Atwood (1990); Nevada Natural Heritage Program files.

ILLUSTRATIONS: Mozingo and Williams (1980), Weixelman and Atwood (1990).

**OTHER GENERAL REFERENCES** (listed separately): Barneby (1964), Clokey (1951), Hickman (1993), Niles et al. (1998).

## **SPECIFIC REFERENCES:**

Barneby, R. C. 1950. Pugillus astragalorum XII. Some problems in California. Aliso 2: 203-215.

Clokey, I. W. 1942. Notes on the flora of the Charleston Mountains, Clark County, Nevada. IV. Astragalus. Madroño 6: 211-222.

Jones, M. E. 1923. Revision of North American Astragalus. Salt Lake City, Utah: privately published. 288 pages.

Knight, T. A. 1989. Status report for Astragalus mohavensis S. Watson var. hemigyrus (Clokey) Barneby. Carson City: Nevada Natural Heritage Program, prepared for the U. S. Fish and Wildlife Service, Reno.

Welsh, S. 1982. Status report for Astragalus mohavensis var. hemigyrus. Portland, Oregon: U. S. Fish and Wildlife Service.

OF FURTHER INTEREST: Hickman (1993) and CAHP spell this A. MOJAVENSIS.